

I claim:

1. A multi-level barbecue grill comprising:

a base cavity having a front wall, a rear wall, a bottom wall and a pair of sidewalls extending upwardly from said bottom wall, said sidewalls, front wall, rear wall and bottom wall defining a cooking area of said grill, said cooking area able to incorporate a heat source therein;

a base-lid pivot;

a top lid positioned upwardly of said base cavity having a lid front wall, a lid rear wall, a top wall, and a pair of opposing lid sidewalls, the rear wall of said lid being pivotally secured by said base-lid pivot to the rear wall of said base cavity for movement between a closed position and an open position, said lid being pivotable relative to said base cavity, and the sidewalls of said lid being adjacent to the sidewalls of said base cavity when said lid is in the closed position relative to said base cavity;

a lower cooking grid for extending over the cooking area opposite to said bottom wall of said base cavity between said sidewalls, and between said front wall and said rear wall;

a first pair of pivots disposed between the rear end of said upper grid and opposing lid sidewalls;

an upper pivotable grid secured to said top lid on said first pair of pivots, said upper grid being parallel to said lower grid;

a pair of oppositely disposed pivot extensions having a pivotable end and a non-pivotable end disposed oppositely from each other on said lower grid, said non-pivotable end secured to said lower grid, and extending upwardly from said lower grid;

a pair of lift arms having a pivotable first end and a pivotable second end, each of said first ends being pivotally secured to said upper grid and said second end being pivotally secured to one of said pair of pivot extensions;

a second pair of pivots disposed between the pivotable end of the respective pivot extensions and the second end of the respective lift arms; and

a third pair of pivots disposed on opposite sides of said upper grid, between said upper grid and said first end of the respective lift arms;

said upper grid and said lower cooking grid being parallel and relatively close to each other when said top lid is in the closed position, and said upper grid pivoting to a position parallel to and relatively far from said lower cooking grid in response to the pivoting of said top lid to the open position.

2. The barbecue grill according to claim 1 wherein said lower grid further comprises a pair of oppositely disposed indentations with a supporting structure extending thereacross to accommodate said pivot extensions.
3. The barbecue grill according to claim 1 wherein said sidewalls of said base cavity additionally comprise at least one pair of oppositely disposed lower grid supports for supporting said lower grid within said cooking area of said base cavity.
4. The barbecue grill according to claim 1 wherein said second pair of pivots are stationary relative to a lateral or vertical direction.
5. The barbecue grill according to claim 1 wherein said third pair of pivots is laterally and vertically movable between a first position and a second position.
6. The barbecue grill according to claim 5 wherein said third pair of pivots is in said first position when said grill is in the closed position and in said second position when said grill is in the open position.

7. The barbecue grill according to claim 1 wherein said first pair of pivots is laterally and vertically moveable between a first position and a second position.
8. The barbecue grill according to claim 7 wherein said first pair of pivots is in said first position when said grill is in the closed position and in said second position when said grill is in the open position.
9. The barbecue grill according to claim 1 wherein said lid and base cavity each further includes an edge having a lip, the lip of said lid and the lip of said base cavity being flush against each other when said top lid is in the closed position to provide a seal for said barbecue grill.
10. The barbecue grill according to claim 9 wherein said lip of said lid is inwardly beveled to create a seal for said barbecue grill when said lid is in the closed position, and said lip of said lid overlaps said lip of said cavity.
11. The barbecue grill according to claim 1 wherein the distance along an x-axis between the pivot of said respective pivot extensions and said respective lift arms, and the pivot of said respective lift arms and said respective upper grids is within 10% of the distance between the first pair of pivots of said upper grid sidewalls and said base-lid pivot.
12. The barbecue grill according to claim 11 wherein the distance along an x-axis between said second pair of pivots of said pivot extensions and said lift arms, and said third pair of pivots of said lift arms and said upper grid, is the same as the distance between said first pair of pivots of said upper grid and said lid and the base-lid pivot of said lid and said base cavity.
13. The barbecue grill according to claim 1 wherein the angle between said second pair of pivots of said pivot extension and said lift arm, and said third pair of pivots of said lift

arm and said upper grid is within 10° of the angle between said first pair of pivots of said upper grid and said lid, and said base-lid pivot of said lid and said base cavity.

14. The barbecue grill according to claim 1 wherein the angle between said second pair of pivots of said pivot extensions and said lift arm, and said third pair of pivots of said lift arms and said upper grid is the same as the angle between said first pair of pivots of said upper grid and said lid, and said base-lid pivot of said lid and said base cavity.
15. The barbecue grill according to claim 1 wherein said base cavity further includes a flavorizer tray within said cooking area and beneath said lower grid.
16. The barbecue grill according to claim 1 and further including a plurality of support legs secured to said base cavity.
17. The barbecue grill according to claim 1 wherein said plurality of support legs extend downwardly from said base cavity to support said grill and are retractable for storage of said grill.
18. The barbecue grill according to claim 17 and further including a pin and lock assembly, wherein said plurality of support legs are able be locked in place in either an extended manner or a retracted manner by said pin and lock assembly.
19. A multi-level barbecue grill comprising:

a base cavity having a front wall, a rear wall, a bottom wall and a pair of sidewalls extending upwardly from said bottom wall, said sidewalls, front wall, rear wall and bottom wall defining a cooking area of said grill, said cooking area able to incorporate a heat source therein;

a base-lid pivot;

a top lid positioned upwardly of said base cavity having a lid front wall, a lid rear wall, a top wall, and a pair of opposing lid sidewalls, the rear wall of said lid being

pivotably secured by said base-lid pivot to the rear wall of said base cavity for movement between a closed position and an open position, said lid being pivotable relative to said base cavity, the sidewall of said lid being adjacent to the sidewalls of said base cavity when said lid is in the closed position relative to said base cavity;

a lower cooking grid for extending over the cooking area opposite to said bottom wall of said base cavity between said sidewalls and between said front wall and said rear wall;

a pair of oppositely disposed pivot extensions having a pivotable end and a non-pivotable end disposed oppositely from each other on said upper grid, said non-pivotable end secured to said upper grid, and extending downwardly from said upper grid;

a pair of lift arms having a pivotable first end and a pivotable second end, each of said first ends being pivotally secured to said pivotable end of the respective pivot extension and said second end being pivotally secured to said lower grid;

a first pair of pivots disposed between the rear end of said upper grid and opposing lid sidewalls;

a second pair of pivots disposed between the pivotable end of the pivot extensions and the first end of the respective lift arms; and

a third pair of pivots disposed on opposite sides of said lower grid pivotally securing said lower grid and said second end of the respective lift arms;

an upper pivotable grid secured to said top lid on said first pair of pivots, said upper grid being parallel to said lower grid;

said upper grid and said lower cooking grid being parallel and relatively close to each other when said top lid is in the closed position, and said upper grid pivoting to a

position parallel to and relatively far from said lower cooking grid in response to the pivoting of said top lid to the open position.

20. A pivotable grid assembly for use with a barbecue grill having a base cavity and a lid, said grid assembly being movable between a closed condition and an open condition and comprising:

a lower grid secured to said base cavity;

an upper pivotable grid pivotably secured to said lid and parallel to said lower grid; and

a pivot assembly secured to said upper grid and said lower grid, said pivot assembly including a pair of oppositely disposed pivot extensions both being secured to one of said upper grid and said lower grid and having a free end, a pair of lift arms each pivotally connected to both the free end of said pivot extension and to the other of said upper grid and said lower grid, for pivoting said upper grid between an upper position and a lower position relative to said lower grid, a pair of lower pivots pivotally securing said pivot extension free end to said lift arm when said pivot extension is secured to said lower grid or said lower grid to said lift arm, and a pair of upper pivots pivotally securing said lift arm to said upper grid or said lift arm to said pivot extension free end when said pivot extension is secured to said upper grid.

21. The pivotable grid assembly according to claim 20 wherein said pair of pivot extensions are oppositely disposed on said lower grid and extend upwardly from said lower grid for raising the level of said pair of lower pivots, each of said pair of pivot extensions being pivotally secured to one of said pair of lift arms, said lift arms being pivotally secured to said upper grid by said pair of upper pivots.

22. The pivotable grid assembly according to claim 20 wherein said pair of lift arms are pivotally secured to said lower grid and are oppositely disposed on opposite sides of said lower grid, and extend from a first position substantially parallel to said lower grid when said barbecue grill is in the closed condition to a second position substantially perpendicular to said lower grid in response to movement of the barbecue grill to the open condition, each of said pair of lift arms being pivotally secured to one of said pair of pivot extensions at said free end of said pair of pivot extensions, said pair of pivot extensions being secured to the underside of said upper grid.
23. A grid assembly for use with a barbecue grill, the grill having a lower bowl, an upper lid pivotally attached to the bowl for opening and closing the bowl, a lower cooking grid extending over and adjacent to the bowl, and an upper warming grid pivotally attached to the lid, the upper warming grid being proximate and parallel to the lower cooking grid when the lid closes the bowl and being distal from and parallel to the lower cooking grid when the lid open the bowl, the grid assembly comprising:
- a pivot extension device for establishing a first pivot axis above and proximate to the location of the lower cooking grid;
 - a lift arm device pivotal about said first pivot axis for establishing a second pivot axis for the upper warming grid, said lift arm device pivoting about said first pivot axis from a closed position when the lid closes the bowl for positioning said first pivot axis close to the lower cooking grid, to an open position more distal from the lower cooking grid than said first pivot axis in response to movement of the lid to open the bowl;
 - the upper warming grid pivoting about said second pivot axis and pivoting relative to the lid in response to movement of the lid to open the bowl to provide a greater distance between the lower cooking grid and the upper warming grid in the absence of

said second pivot axis, to enable a more extensive upper cooking grid while providing improved access to all portions of the lower cooking grid.